

ABSTRACT

A semiconductor device includes a P-type semiconductor substrate, a P-channel DMOS transistor, a CMOS transistor. The P-channel DMOS transistor is disposed on the P-type semiconductor substrate and includes a drain formed of the P-type semiconductor substrate and a source formed in the P-type semiconductor substrate on a main surface of the P-type semiconductor substrate. The CMOS transistor is disposed on the P-type semiconductor substrate and includes a P-channel MOS transistor and an N-channel MOS transistor. The P-channel MOS transistor is formed in an N-type region formed in the P-type semiconductor substrate on the main surface of the P-type semiconductor substrate. The N-channel MOS transistor is formed in a P-type region formed in the P-type semiconductor substrate on the main surface of the P-type semiconductor substrate. The P-type region is electrically isolated from the P-type semiconductor substrate by the N-type region.